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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/775,712	02/09/2004	Connie C. Liu	SEA-2845.1	3832
36521	7590	09/21/2004	EXAMINER	
MOSER, PATTERSON & SHERIDAN LLP/ SEAGATE TECHNOLOGY LLC 595 SHREWSBURY AVENUE SUITE 100 SHREWSBURY, NJ 07702			RICKMAN, HOLLY C	
			ART UNIT	PAPER NUMBER
			1773	
DATE MAILED: 09/21/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/775,712

Applicant(s)

LIU ET AL.

Examiner

Holly Rickman

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 7-9 and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Ross et al. (US 5980997).

Ross et al. disclose a magnetic recording disk having a substrate with a sputtered layer of NiP and an electrolessly deposited layer of NiP thereon (see col. 2, lines 18-50; col. 5, lines 7-10; col. 7, lines 7-11).

### *Claim Rejections - 35 USC § 102/103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 7-9 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Ranjan et al. (US 5840394).

Ranjan et al. disclose a magnetic recording disk having a substrate coated with two layers of NiP. The reference fails to teach that the first Ni layer is sputtered and the second is electrolessly deposited. However, these are process limitations in article claims. These limitations do not patentably distinguish the present claims over Ranjan et al. in the absence of evidence establishing a material difference between the two.

Even though product-by-process limitations limit and define a product by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the claim containing product-by-process limitations is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

#### ***Claim Rejections - 35 USC § 103***

5. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ranjan et al. (US 5840394) in view of Sato et al. (US 6699601).

Ranjan et al. disclose a magnetic recording disk having a substrate coated with two layers of NiP. The reference fails to teach that the first Ni layer is sputtered and the second is electrolessly deposited. However, these are process limitations in article claims. These limitations do not patentably distinguish the present claims over Ranjan et al. in the absence of evidence establishing a material difference between the two.

Even though product-by-process limitations limit and define a product by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the claim containing product-by-process limitations is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

Furthermore, the reference is silent with respect to the claimed components of the information storage system.

Sato et al. teach that it is known in the art to use a magnetic recording medium in combination with a magnetic head and actuator arm to form a functional disk drive apparatus (col. 9, lines 20-48).

It would have been obvious to one of ordinary skill in the art at the time of invention to use the magnetic head and actuator components taught by Sato et al. in combination with the magnetic recording medium taught by Ranjan et al. in order to provide a functional disk drive apparatus.

6. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ross et al. (US 5980997) in view of Sato et al. (US 6699601).

Ross et al. disclose a magnetic recording disk having a substrate with a sputtered layer of NiP and an electrolessly deposited layer of NiP thereon (see col. 2, lines 18-50; col. 5, lines 7-10; col. 7, lines 7-11).

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The reference is silent with respect to the claimed components of the information storage system.

Sato et al. teach that it is known in the art to use a magnetic recording medium in combination with a magnetic head and actuator arm to form a functional disk drive apparatus (col. 9, lines 20-48).

It would have been obvious to one of ordinary skill in the art at the time of invention to use the magnetic head and actuator components taught by Sato et al. in combination with the magnetic recording medium taught by Ross et al. in order to provide a functional disk drive apparatus.

With respect to claim 6, Ross et al. teach that it is known in the art to laser texture the surface of the second NiP layer deposited on the substrate in order to reduce stiction between the magnetic disk and the recording head (col. 1, lines 8-23). Ross et al. fail to teach the claimed Ra value of roughness. However, the reference does teach that surface roughness is a result effective parameter that affects stiction. As such, it would have been obvious to one of ordinary skill in the art at the time of invention to determine the optimal Ra value for the NiP layer taught by Ross et al.

7. Claims 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ross et al. (US 5980997).

Ross et al. disclose a magnetic recording disk having a substrate with a sputtered layer of NiP and an electrolessly deposited layer of NiP thereon (see col. 2, lines 18-50; col. 5, lines 7-10; col. 7, lines 7-11).

Ross et al. teach that it is known in the art to laser texture the surface of the second NiP layer deposited on the substrate in order to reduce stiction between the magnetic disk and the recording head (col. 1, lines 8-23). Ross et al. fail to teach the claimed Ra value of roughness. However, the reference does teach that surface roughness is a result effective parameter that affects stiction. As such, it would have been obvious to one of ordinary skill in the art at the time of invention to determine the optimal Ra value for the NiP layer taught by Ross et al.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Holly Rickman whose telephone number is (571) 272-1514. The examiner can normally be reached on Monday-Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on (571) 272-1535. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Holly Rickman". The signature is fluid and cursive, with the first name "Holly" being more prominent than the last name "Rickman".

Holly Rickman  
Primary Examiner  
Art Unit 1773

hr  
September 17, 2004